

Amendment filed on February 20, 2004 (pages 12-16), and those arguments are incorporated herein by reference. Nonetheless, Applicant will now highlight certain aspects of those arguments for the Examiner's convenience.

Claims 8, 31 and 39

Each of independent claims 8, 31 and 39 requires (among other limitations):

- 1) an utterance that includes a plurality of syllables; and
- 2) identifying an endpoint of the utterance based on the duration of the final syllable of the utterance.

For example, claim 31 recites:

31. A machine-readable program storage medium tangibly embodying a sequence of instructions executable by a machine to perform a method for endpoint detection, the method comprising:

inputting speech representing an utterance, the utterance having an intonation, **the utterance including a plurality of syllables**;
determining a duration of the final syllable of the utterance; and
identifying an endpoint of the utterance based on the intonation of the utterance **and based on the duration of the final syllable of the utterance**.
(Emphasis added.)

Peckham and Lee do not disclose or suggest (either individually or in combination) all of the limitations of any of Applicant's claims. Although Applicant's arguments are directed to the alleged combination of references (see Applicant's last response), it is useful to focus on Lee now, since Applicant and the Examiner disagree on what Lee discloses.

On page 8 (paragraph 9) of the Final Office Action, the Examiner refers to Applicant's argument that Lee only discloses using statistical (probable) minimum and maximum durations of a typical syllable, not using the duration of the final syllable of an utterance for endpoint detection (Amendment filed Feb. 20, 2004, p. 13, last paragraph). Specifically, the Examiner's response is:

The examiner disagrees with the applicant's assertion because Lee teaches to detect the endpoint of an utterance based on several factors, including duration of each syllable in the utterance, where final syllable also includes in the start to end of the whole utterance of speech (see col. 10, lines 24-28).

The Examiner's statement is incorrect, and furthermore, it appears to miss the main point of Applicant's last response: The point is that the disclosure in Lee from col. 9, line 62 through col. 10, line 30 has nothing to do with identifying endpoints of an utterance that includes a plurality of syllables -- that section of Lee relates to recognition of individual syllables -- see col. 9, lines 62-65.

First, note that in Lee, "recognizing" a syllable does not mean identifying the syllable's endpoints. "Recognizing" means determining what the syllable actually is (e.g., "yi" or "sheng"). In Lee, "recognition" of a syllable happens after the individual syllable's endpoints are located. Thus, at col. 10, lines 1-8, Lee discloses that to recognize the individual syllables, the system must first locate the ending points of the individual syllables.

More importantly, col. 10 in Lee does not relate to identifying the endpoints of an utterance that includes a plurality syllables. Thus, at col. 10, lines 24-28, Lee states, "In this way, after the computer has accumulated the scores of all possible syllables from

the start to the end of the whole utterance of speech, the syllable string with the highest score can thus be located and used as the result of this matching process." This quote is not describing how endpoint identification is accomplished. This quote refers to how syllables are recognized, which happens after the endpoints of the utterance are identified (col. 6, lines 13-36) and after the endpoints of the individual syllables are identified (col. 10, lines 1-5). This statement is not describing identification of endpoints of syllables or identifying endpoints of an utterance that includes a plurality of syllables.

On the other hand, in a different section of text, Lee does disclose identifying the endpoints of an utterance that can include a plurality of syllables. See col. 6, lines 13-36, which describes Lee's endpointing process which happens before the above-mentioned recognition process. However, there is no disclosure in col. 6, lines 13-36 of basing this identifying of endpoints on the duration of any syllable, and certainly not the duration of the final syllable of an utterance. In fact, there is no disclosure or suggestion of doing that anywhere in Lee, or in Peckham.

To summarize, therefore, in contrast with claims 8, 31 and 29, Lee does not disclose identifying an endpoint of an utterance that includes a plurality of syllables based (at least in part) on the duration of the final syllable of the utterance. Likewise, Peckham also fails to disclose or suggest doing that, as the Examiner has already admitted. For at least this reason, therefore, the combination of Peckham and Lee fails to disclose or suggest all of the limitations in Applicant's claims, and the rejection, therefore, should be withdrawn.

In addition, the Examiner's statement regarding the motivation to combine Lee and Peckham lacks merit. The Examiner responds to Applicant's arguments on this point (last Amendment, p. 14) by stating that the motivation would be, "In this case, detect the endpoint of the utterance, which helps enhancement of recognition process (see col. 3, lines 15-20)." Final Office Action, p. 9.

The Examiner merely restates the original (unsupportable) rationale for combining the references and fails to rebut Applicant's argument. As previously stated, Peckham already discloses an endpoint detection technique, and there is no basis to conclude that the recognition technique in Peckham would be improved by substituting the endpointing technique disclosed in Lee, or vice versa. Hence, there would be no motivation for one skilled in the art to attempt to combine the teachings of these references.

Independent Claim 9

In paragraph 10 of the Final Office Action (p. 9), the Examiner refers to Applicant's argument on p. 15 of the last Amendment, by stating:

"The Examiner note that the above limitation is teaches at col. 9, line 62 to col. 10, lines 30. Here endpoint is detected using tone model as well as individual syllable."

The Examiner's response is incorrect. As noted above, the section of text in Lee cited by the Examiner relates to recognition, not to identifying the endpoints of an utterance that includes a plurality of syllables. Furthermore, even though this section of text briefly discusses locating the endpoint of an individual syllable, the tone models are not used for that purpose. In Lee, the base syllable model and the tone model are used

to recognize a syllable after the ending points of the syllable are identified. See col. 10, lines 1-17. The tone models are not used to detect the endpoints of any syllable or an utterance that includes a plurality of syllables.

Consequently, Lee does not disclose or suggest determining a probability based on a result of comparing the intonation of the utterance with an intonation model, and then identifying an endpoint of the utterance based on that probability. For at least this reason, therefore, claim 9 is also patentable over the cited art.

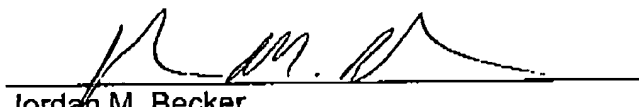
Conclusion

For the foregoing reasons, the Examiner's responses to Applicant's arguments are in error. Applicant, therefore, maintains the arguments in the Amendment filed on February 20, 2004. For the reasons stated therein and above, the present application is believed to be in condition for allowance, and such action is earnestly requested.

If any additional fee is required, please charge Deposit Account No. 02-2666.

Respectfully submitted,
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